



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/470,604 | 12/22/1999 | ANDREW C. GALLAGHER | 80041-DMW | 6360 |

1333 7590 06/17/2003

PATENT LEGAL STAFF
EASTMAN KODAK COMPANY
343 STATE STREET
ROCHESTER, NY 14650-2201

| |
|----------|
| EXAMINER |
|----------|

BRINICH, STEPHEN M

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2624

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office

Address : COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

| | | | |
|---------------------------------|-------------|---|---------------------|
| APPLICATION NO./ CONTROL NO. | FILING DATE | FIRST NAMED INVENTOR / PATENT IN REEXAMINATION | ATTORNEY DOCKET NO. |
|---------------------------------|-------------|---|---------------------|

| |
|----------|
| EXAMINER |
|----------|

| | |
|----------|-------|
| ART UNIT | PAPER |
|----------|-------|

4

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Office Action Summary

Application No.

09/470,604

Applicant(s)

GALLAGHER ET AL.

Examiner

Stephen M Brinich

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 20-33 is/are allowed.
- 6) ☐ Claim(s) 1,5,6,16,17,34,38,39,49 and 50 is/are rejected.
- 7) ☐ Claim(s) 2-4,7-15,18,19,35-37,40-48,51 and 52 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2624

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 16-17, 34, 38, & 49-50 are rejected under 35 U.S.C. 102(b) as being anticipated by Kwon et al.

Re claims 1, 5, 34, 38, Kwon et al. discloses (Figure 1) a image processing system in which the image channel is split into first and second channels. In the first channel, a predetermined tone scale conversion (LUT table 70) is provided, image values from a region around a central pixel are provided and subjected to statistical processing (convolution 50, 50a; squaring 45, 45a), and the tone scale conversion is normalized for the resulting output (multiplier 25). The two image channels are then combined.

Re claims 16-17 & 49-50, each pixel region in the image is processed in turn (column 1, lines 50-52).

Art Unit: 2624

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6 & 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon et al.

Re claims 6 & 39, Kwon et al. discloses that the convolver array is "preferably" 11 by 11. The use of an array of a smaller size would have the well-known advantage of reducing the amount of memory and calculation required in processing. The use of a 5x5 or smaller array in Kwon et al. in order to obtain those advantages would be an expedient obvious to one of ordinary skill in the art.

Allowable Subject Matter

5. Claims 20-33 are allowed.

6. Claims 2-4, 7-15, 18-19, 35-37, 40-48, & 51-52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2624

7. The following is a statement of reasons for the indication of allowable subject matter:

Re claims 2-3 & 35-36, the art of record does not teach or suggest the isolation of a low-pass or pedestal signal in conjunction with the described split-channel image processing.

Re claims 4 & 37, Kwon et al. teaches that the second signal is unmodified when combined with the first signal.

Re claims 7 & 40 (and dependent claims 8-10 & 41-43), the art of record does not teach or suggest the recited gradient determination in conjunction with the described split-channel image processing.

Re claims 11 & 44 (and dependent claims 12 & 45), the art of record does not teach or suggest the recited mapping via a scaled tone scale function.

Re claims 13-14, 18-19, 46-47, & 51-52 (and dependent claims 15 & 48), the art of record does not teach or suggest the recited tone scale function coordinate normalization or parametric adjustment

Re claim 20 (and dependent claims 21-33), the art of record does not teach or suggest the recited arrangement of first and second intermediate values derived from a tone scale function and inverse scaling function in determining an enhanced pixel value.

Art Unit: 2624

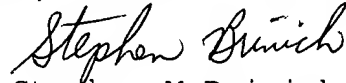
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Brinich at 703-305-4390. The examiner can normally be reached on weekdays 7:00-4:30, alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2600 Customer Service center at 703-306-0377.

If attempts to contact the examiner and the Customer Service Center are unsuccessful, supervisor David Moore can be contacted at 703-308-7452.

Faxes pertaining to this application should be directed to the Tech Center 2600 official fax number, which is 703-872-9314.


Stephen M Brinich
Examiner
Art Unit 2624

smb
June 16, 2003